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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,700	03/29/2004	Kazuyuki Kiuchi	Q80631	9045
65565	7590	05/02/2007	EXAMINER	
SUGHRUE-265550			FIGUEROA, JOHN J	
2100 PENNSYLVANIA AVE. NW			ART UNIT	
WASHINGTON, DC 20037-3213			PAPER NUMBER	
			1712	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/810,700

Applicant(s)

KIUCHI ET AL.

Examiner

John J. Figueroa

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. Receipt is acknowledged of a request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission (amendment), filed on April 9, 2007. The request has been deemed proper and this application has been hereby examined in view of said amendment.

### ***Response to RCE Amendment***

2. The nonstatutory obviousness-type double patenting rejections in item 1 on page 2 of the Final Office Action of December 8, 2006, hereinafter 'FOA', are maintained for the same reasons set forth and previously made of record in said item of FOA.

3. The 35 U.S.C. 102(b) rejection of claims 1-7, 14 and 15 as anticipated by European Patent Application Number (EP) 1,033,393 A2 to Oshima et al., hereinafter 'Oshima', previously made of record in item 2 on page 2 of FOA, has been withdrawn in view of Applicant's amendment/arguments in the response filed with the RCE of April 9, 2007, hereinafter 'Response'.

### ***Election/Restrictions***

4. A restriction requirement was previously presented in the Office Action of June 30, 2006. Group I, claims 1-7, 14 and 15 had been elected. Claims 8-13 are withdrawn

from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim in accordance with said restriction requirement.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1 154 002 A1 to Kiuchi et al. For purposes of the instant rejection, Examiner will be citing from a corresponding United States patent, namely USPN 7,067,030 B2, (hereinafter 'Kiuchi').

Kiuchi discloses a heat-peelable adhesive sheet that comprises a substrate and having on one, or both sides, a heat-expandable layer containing heat-expandable microspheres and an adhesive layer comprising an adhesive substance; wherein the substrate has sufficient heat resistance and stretchability to cut an adherend so as to form and secure a sufficient space between the resultant cut pieces, and can further withstand heat treatment for expanding said heat-expandable layer. (Abstract; Figures 1-3; col. 1, line 65 to col. 2, line 53) Although the heat-expandable adhesive layer can comprise an adhesive substance for imparting tackiness and heat-expandable

Art Unit: 1712

microspheres for imparting thermal expansibility (a single layer heat-expandable adhesive layer), Kiuchi further teaches that these two functions may be separately allotted to form an adhesive layer having tackiness and a heat-expandable layer having thermal expansibility, i.e., a heat-expandable layer containing heat-expandable microspheres (and/or tackiness) and a second adhesive layer comprising an adhesive substance. (Col. 4, lines 43-62)

The microspheres can be microspheres formed from thermoplastic shells that burst upon thermal expansion, wherein the average particle diameter of the heat-expandable microspheres is from 1 to 50  $\mu\text{m}$ ; are present in an amount from 25 to 125 parts by weight, per 100 parts by weight of the base polymer; and efficiently reduce the tackiness of the adhesive layer containing an adhesive substance through a heat treatment. (Col. 6, line 33 to col. 7, line 8) The heat-expandable layer can have a thickness of from about 5 to 300  $\mu\text{m}$ . (Col. 7, lines 9-38) Besides the adhesive substances, appropriate additives may be incorporated into the adhesive layer(s), such as a crosslinking agent (e.g., an isocyanate crosslinking agent, epoxy crosslinking agent, etc.), a tackifier, a plasticizer, a filler, and/or an antioxidant. (Col. 6, lines 26-32)

Kiuchi further discloses that the adhesive sheet can contain additional layers, such as a separator layer, an ordinary adhesive layer not containing heat-expandable microspheres and/or an interlayer that can be formed, for example, between the substrate and the heat-expandable adhesive layer. (Col. 7, lines 39-60; col. 8, lines 19-59; Figure 3)

Art Unit: 1712

Moreover, Kiuchi discloses that when the heat-expandable microspheres are foamed or expanded by a thermal treatment, the heat-expandable layer changes in volume to form a three-dimensional structure with a rough surface, and thus the adhesive strength decreases greatly. (Col. 8, line 63 to col. 9, line 21) Accordingly, Kiuchi is implicitly disclosing that the substrate can be peelable from the heat-expandable adhesive layer.

Finally, Kiuchi discloses that the heat-peelable adhesive sheet can be used in applications in which an adherend is permanently bonded, or bonded for a given period of time, such as for use as semiconductor wafer fixing materials, carrier tapes and temporarily fixing parts in steps for assembling various electrical apparatus, electronic apparatus or displays; and that it is especially suitable for use in processes for producing electronic parts. (Col. 9, line 22-41)

Thus, the claims are anticipated by Kiuchi.

### ***Response to Arguments***

#### **The Double Patenting Rejections (item 1 of FOA)**

7. Applicant did not provide substantive arguments in Response with respect to the outstanding nonstatutory obviousness-type double patenting rejections made of record in FOA. Therefore, these double patenting rejections are maintained for the same reasons previously set forth in prior Office Actions.

#### **The 35 U.S.C. 102 Rejection over Oshima (item 2 of FOA)**

Art Unit: 1712

8. Applicant's arguments in Response with respect to the 35 U.S.C. 102(b) rejection of claims 1-7, 14 and 15 as anticipated by Oshima have been fully considered and deemed persuasive, particularly because Oshima does not teach or suggest the substrate peeled from the heat-expandable pressure sensitive adhesive layer.

Thus, this rejection has been withdrawn.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. The examiner can normally be reached on Mon-Thurs & alt. Fri 8:00-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJF/RAG



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